# **TableTapper**

## Instruction Manual



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#### Introduction

Your Adaptivation, Inc. *TableTapper* has been designed to provide easy switch access for individuals with physical or cognitive disabilities. It functions as a vibration sensor switch. It can activate battery-operated assistive devices by merely tapping the surface on which the *TableTapper* is resting. The *TableTapper* turns virtually any hard surface into a tap-sensitive switch. When the unit senses vibrations above a certain level (set by the Sensitivity Knob), it activates the battery-operated device connected to the 1/8-inch (3.55 mm) plug.

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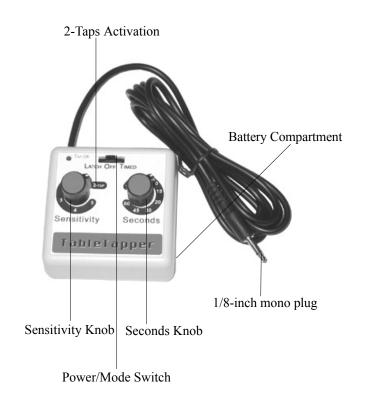
## **Battery Installation**

Under normal operation, your battery should last many months (nine or more). This is true only if the device is turned OFF when not in use. If the device is left in either Latch Mode or Timed Mode, the battery will last only a matter of weeks. **Please remember to turn off the device when it is not in use!** 

**Warning:** When replacing the battery, you will be opening the device and exposing the internal electronic components. During this procedure, be very careful to not touch any of these components. Some of them are susceptible to damage due to static charges. This is especially important during winter months when static electricity is at its worst.

- 1. Check to ensure that your *TableTapper* is turned of f by sliding the Power/Mode Switch to the OFF (center) position.
- 2. Using a Philips-head screwdriver, remove the two screws on the back of the *TableTapper*, and remove the back cover.
- 3. Remove the old battery and replace with a fresh 9-volt (alkaline only) battery.
- 4. Replace the back cover and secure with the Philips-head screws. Tighten firmly.

## TableTapper Diagram



### **Sensitivity**

The Sensitivity Knob controls the sensitivity of the *TableTapper* circuitry. The sensitivity increases as the knob is moved counter-clockwise. Setting #5 is the most sensitive, while setting #1 is the least sensitive. On #5, the very slightest tap will activate the device. On setting #1, a heavy tap or even a fist pound will be required.

**Important Notice:** The type of surface on which the *TableTapper* is placed will afect the sensitivity. A heavy, oak desk is very sturdy and does not easily transmit vibrations across the surface of a desk. A metal or wood tray will more readily transmit vibrations from your finger to the *TableTapper*.

On one end of the continuum would be to set your TableTapper on the ground or concrete surface. It will take much more effort to activate it. On the other end of the continuum would be a metal wheelchair tray or metal file cabinet. Such surfaces are high reactive to your finger taps, and will vibrate well. Keep in mind the type of surface on which the *TableTapper* will be placed, and adjust the Sensitivity Knob accordingly. You can also increase the *TableTapper* sensitivity by removing the four rubber bumper feet, on the bottom, but you will lose the skid protection that the bumpers provide.

See the next section for a description of 2-Taps Activation.

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## Operating your TableTapper

The *TableTapper* is sensitive primarily to high frequency vibrations (i.e. tapping with knuckles or fingernails) and will not typically activate when the table is lightly jiggled or bumped. If the jiggling or bumping causes the table to hit the wall or other rigid objects then the *TableTapper* will sense this and activate the adapted device.

The *TableTapper* will operate in one of two modes:

- 1. Latch Mode: One tap causes the *TableTapper* to turn the assistive device ON. A second tap turns the assistive device OFF.
- 2. Timed Mode: The *TableTapper* will activate the device for a period of 1 to 60 seconds, depending on the setting of the Timer Knob.

#### To operate the *TableTapper*:

- 1. Make sure a fresh battery is installed.
- 2. Plug the *TableTapper* cord into the switch-adapted device to be controlled.
- Slide the Power/Mode Switch to the desired setting, either Latch or Timed.

### 2-Tap

Occasionally, your student or client may accidentally bump the surface on which the *TableTapper* is resting, causing unwanted activations. 2-Tap activation can be used to address this problem. To use 2-Tap activation, turn the Sensitivity Knob to the '2-Taps' position. With 2-Tap activation, the user is required to tap twice within a two-second period. If the *TableTapper* detects a single tap, but not a second tap within two seconds, then nothing will happen. If a second tap occurs within two seconds of the first tap, then the *TableTapper* will activate the toy or other device that the *TableTapper* is controlling. The mode of activation will be Latch or Timed, depending on the Power/Mode Switch (see the next section).

The sensitivity of the *TableTapper* will be fixed at about the equivalent of the Sensitivity Knob set at '3'. Medium-light taps should be recognized.

If the two taps are very close in proximity the *TableTapper* may not recognize it as two separate taps, but as a single, heavy tap or fist pound. Another tap within two seconds of the first, single tap will activate the device.

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## Operating your TableTapper, cont'd.

- 4. If using Timed Mode, adjust the Timing Knob to the desired time, 1 to 60 seconds.
- 5. Set the Sensitivity Knob to the desired setting. Keep in mind the surface on which the *TableTapper* is resting and the ability of the student or client. Periodic adjustments may have to be made as the student gets more proficient or fatigued.
- 6. Return the Power/Mode Switch to the OFF position when you are not using your *TableTapper*.

Note: Signal-to-noise ratio is the strength of one's finger tap relative to unwanted vibrations coming from elsewhere. It is desirable to have a high signal to noise ratio. In such a case, there will be very little difference (noise) from unintentional movement, and the student will generate consistent, willful taps (signal). A low signal to noise ratio can result in poor performance (false positives and/or false negatives). An example of this is the situation where the Table Tapper is placed on a wheelchair tray. The user's motor skills allow for only very light taps, but he frequently coughs. The coughing activates the Table Tapper, so the sensitivity needs to be lowered. Then, the problem is that he cannot activate the Table Tapper with a finger tap because he cannot tap hard enough.

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**Trouble-Shooting Guide** 

- Switch-adapted toy or device does not turn on. Double check that the plug is inserted fully. Some toys or other battery-operated devices might not be able to be switch adapted. Test battery-operated device with a different switch (Pal Pad, Jelly Bean, Buddy Button, etc.).
- <u>The Battery does not last long.</u> Make sure you are using an alkaline 9-volt battery. Make sure you turn the device OFF when not in use.
- The *TableTapper* activates even when you do not want it to. Use the Sensitivity Knob to decrease the device's sensitivity (turn clockwise).
- <u>The TableTapper does not activate</u>. Is your battery fresh? Adjust the Sensitivity Knob to increase sensitivity (turn counterclockwise).
- Switch-adapted toy or device goes ON or OFF uncontrollably. Is the device resting on the same surface as the *TableTapper*? Does the toy move, vibrate or make loud sounds? If so, these can affect the *TableTapper* operation. Move them to another location or decrease the *TableTapper* sensitivity.

**Notes** 

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#### **Notes**

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# TableTapper 1 Year Limited Warranty

Your Adaptivation *TableTapper* was carefully tested and inspected before it was shipped from the factory . We warrant this product to be free from defects in materials and workmanship under normal use and service for one (1) year from the date of purchase. In the event of a defect in materials or workmanship, we will either repair or replace without charge, at our option, any part which in our judgment shows evidence of such defect within one (1) year of purchase.

This warranty does not apply if the *TableTapper* has been misused, abused, altered, or tampered with. At the end of the warranty period, Adaptivation shall be under no further obligation expressed or implied.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

For repair service, contact Adaptivation's technical dept. to receive a required RMA# (return material authorization number) prior to the return of the device.